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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,410	06/20/2002	Jiri Babej	60174-026	8965

7590 02/24/2005

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EXAMINER

MITCHELL, KATHERINE W

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,410

Applicant(s)

BABEJ, JIRI

Examiner

Katherine W. Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-55 is/are pending in the application.
4a) Of the above claim(s) 41-55 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 24-40 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 03 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/15/2004
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 41-55 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The original application had examinable claims directed only to a functional element having specific properties and proportions of the head. The newly-added method and assembly claims do not share the technical feature of the original functional element.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 41-55 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

This application contains claims drawn to an invention nonelected with traverse. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the conical cutting surface, the threaded inner surface of the shaft, functional element formation as a cold formed part, and thread formation by rolling or compression forming must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Examiner notes that applicant states that "426" in Fig 11 shows the conical surface. Examiner has enlarged the drawing and cannot discern any indication of a conical inner surface. Note that in an apparatus claim, no patentable weight is given to the method of forming the device.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 33 is objected to because of the following informalities: At least one comma is missing that is critical to the meaning of the claim:

“a shaft part and a head part axially aligned with said shaft part forming a rivet flangeless interface...” is written. It can be read:

--a shaft part and a head part, axially aligned with said shaft part, forming a rivet flangeless interface...-- OR

--a shaft part and a head part axially aligned, with said shaft part forming a rivet flangeless interface...--

Examiner is assuming the first choice. Also, “rivet” should be --riveted--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27, beginning with “and the thickness..” in line 3, is completely unclear. It appears nothing is being claimed about the thickness and double the length of the radius, so examiner is ignoring this. Further, the sheet metal part and its thickness lack

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antecedent basis, as does the length of the radius of said inner fold. This section is not being considered since it is not understood.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(f) he did not himself invent the subject matter sought to be patented.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 24 –29 and 33-37 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. Priority document DE 10033149 does not list the sole inventor of the instant application as an inventor. However, Figure 11 shows the element of claim 24, and “426” described as showing the conical inner cutting edge, which examiner has noted is not apparent in the pending figures. The rounded outer edge and conical inner edge are shown (Fig 11). The tubular inner surface of the head is shown (Fig 1 and 15) The head with a longitudinal dimension is

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shown (Fig 1). The hollow shaft is shown (Fig 10). A threaded outer shaft is shown (Fig 19 and 20).

11. Claims 24-40 are rejected under 35 U.S.C. 102(b) as anticipated by Muller USP 4633560 or, in the alternative, under 35 U.S.C. 103(a) as obvious over Muller in view of Danino EPO 0028019

Re claims 24 and 33: Muller teaches a functional element consisting of a shaft part (10) and a head part (30) axially aligned with the shaft and forming a hollow tubular wall capable of forming a riveting joint with a panel element. The shaft part defines a shaft diameter and said tubular wall defines an outer wall diameter substantially the same as said shaft diameter, as shown in Figs. 1 and 3 and 27-29. Examiner notes that substantially is a broad term. (In re Nehrenberg CCPA) 126 USPQ 383). The head part includes a distal end defining an outer edge rounded (49) and an inner edge defining a cutting surface (47) remote from said shaft part in the abstract and col 8 lines 3-35 and Fig 1, capable for riveting to a panel element (col 7 lines 41-50). The head part is hollow (Fig 1).

Examiner believes "substantially the same as said shaft diameter" is taught by Muller, but if it is held that it is not taught, Danino teaches a functional element (blind nut 1) with a shaft and head of substantially the same diameter in the abstract, Figs 1-3, and the last paragraph of page 2. The first paragraph on page 2, which actually begins on page 1, teaches that the flange is wasteful in material and requires an additional manufacturing step, both of which add time and costs to the element, and thus the head and shaft the same size would minimize these costs. In addition, a change in size

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would have been an obvious matter of design choice to change the shaft size to more closely match the head size, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). This change would allow a larger and beefier shaft to be used, which would be practical especially in light of new stronger and less dense materials which would not require a large joint area or flange for support.

Further Re claim 33: Muller teaches in Figs 27-29 the head part forming a rivet flangeless interface with said shaft part. Note that applicant also has a small step at the interface, and the small step at the interface does not meet the definition of a flange:

flange (flānj) *noun*

A protruding rim, edge, rib, or collar, as on a wheel or a pipe shaft, used to strengthen an object, hold it in place, or attach it to another object. ¹

Again, examiner believes Muller meets the definition of a flangeless interface between shaft and head, If it is held that this limitation is not met, Danino teaches a flangeless interface in Figs 1-3, the first paragraph on page 2, (which actually begins on page 1,) and the last paragraph on page 2, that the flange is wasteful in material and requires an additional manufacturing step, both of which add time and costs to the element.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Muller and Danino before him at the time the invention was made, to

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modify Muller as taught by Danino to include a flangeless intersection, in order to obtain a savings in material and manufacturing costs, as taught/suggested by Danino on page 2.

Re claims 26 and 34: Muller Figs 3 and 7 best show the inner surface of the head having a substantially tubular shape.

Re claim 27 and 35: The head part includes a longitudinal dimension for forming an annular fold (Muller Fig. 11 and 14).

Re claims 29 and 37: Muller Figs 1-3 show a threaded outer surface of the shaft.

Re claims 28 and 30 and 36 and 38: Muller Fig 27 shows a hollow shaft portion having inner threads.

Re claims 31-32 and 39-40: The methods of forming the device are not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight, as Muller's fastener is capable of these limitations.

12. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller or Muller in view of Danino as applied above, in view of Mauer et al USP 6338601. As discussed above, Muller or Muller in view of Danino teaches all the elements except that the inner edge of the element defines a conical cutting surface. Mauer teaches a punch rivet having a conical inner face (4) on the distal end of the rivet shank in the abstract and Figures. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Muller, or Muller in view of Danino, and Mauer before him at the time the invention was made, to modify Muller, or Muller in view of Danino, as taught by Mauer to include an inner edge defining a conical cutting surface, in order

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to obtain a sharp cutting edge with optimal piercing abilities. One would have been motivated to make such a combination because a clean cut would have been obtained, as it is well known that conical points are commonly used in cutting and drilling applications.

Response to Arguments

13. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection, since claims 1-23 were canceled and replaced by different claims. However, as noted above, examiner points out that "substantial" is a very broad term.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 703-305-6713. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Examiner
Art Unit 3677

Kwm
2/18/2005



ROBERT J. SANDY
PRIMARY EXAMINER